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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,687	03/21/2002	Brian R. Odgers	36-1531	4659
23117 7590 09/18/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
BOYCE, ANDRE D				
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3623				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/088,687

**Applicant(s)**

ODGERS ET AL.

**Examiner**

Andre Boyce

**Art Unit**

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-850)  
Paper No(s)/Mail Date 7/7/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 7, 2008 has been entered.
2. Claims 1, 3-7, 9 and 11-22 have been amended. Claim 2 has been canceled. Claims 24-26 have been added and claims 1 and 3-26 are pending.

***Claim Objections***

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Applicant has added two new number 24 claims. The second number 24 claim will be renumbered number 25.

4. Claim 1 is objected to because of the following informalities: The claim recites "mans" in line 13. For examination purposes, the Examiner will interpret the term as "means." Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- Claim 23 recites the limitation "the resource profile," "the resource" and "said step of reviewing a resource profile." There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
8. Claims 1, 3-17 and 19-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Du et al (US 5,826,239).

As per claims 1, 11, 15, 19, 24 and 25, Du teaches storing constraint definition data defining constraints relating to availability of said workers (resources) for allocation to respective tasks (column 9, lines 43-45 where HP OpenPM evaluates

the rules and performs the rule actions when the rule conditions are met, whereby the rule conditions constitute the constraints of the resource allocation system, wherein a resource is a person, computer process or machine, column 10, lines 38-41); storing an initial data representation of worker (resource) availability (column 4, lines 27-28 where the system checks a central site for availability of resource groups, whereby the central site constitutes a storage of initial data); receiving at data processing means (global resource manager, GRM, figure 8), from a first worker interface, a first worker availability change proposal concerning availability of a first worker (resource) (i.e., each local resource manager (LRM) has all status information of and full control over resources at its site, column 3, lines 4-5, wherein a plurality of LRMs are connected to the GRM, figure 8 and column 13, lines 12-25); operating said data processing means to: generate a proposed data representation of worker (resource) availability, based on the initial data representation together with said first worker availability change proposal (column 13, lines 6-8, where resource status or availability is provided); determine whether said proposed data representation is compatible with said constraint definition data (column 4, lines 57-67 and column 5, line 1, where the system determines the resource availability with respect to the specified activity and forwards the information to the second computer to assign the resource to the activity); in the case the data is compatible with the constraint definition data, substitute the proposed data representation for the initial data representation to generate a new initial data representation (column 4, lines 57-67 and column 5, lines 1-5, wherein the local resource manager assigns the

available resources and updates the stored status data); and in the case the data is not compatible with the constraint definition data, transmitting a rejection signal to a second worker interface (i.e., unpredictable status change, wherein a resource may become not available, wherein the status change, i.e., rejection, is transmitted to another local resource manager (LRM), which is the interface for all the resources associated with the LRM, column 16, lines 56-66), whereby said second worker (resource) interface may respond to receipt of said rejection signal by outputting a second worker availability change proposal which compensates for the first worker availability change proposal (i.e., LRM selects one of the resources in the resource group to perform the specified activity, based upon status data, columns 4-5, lines 65-67 and 1-5).

As per claims 3 and 13, recites the same limitations as claim 1 and is therefore subject to the same art rejection. Du teaches multiple resource interfaces in Figure 1 where there are multiple users and machines.

As per claim 4, Du teaches at least one resource interface is provided with at least one resource profile, the resource profile comprising data in respect of a resource (i.e., local resource manager (LRM) including resource database 150, column 13, lines 41-47), the method further comprising the steps of: receiving at a resource interface a rejection signal (i.e., unavailable resource state, column 15, lines 55-60); reviewing a resource profile provided with respect to that resource interface; and outputting availability data to the data processing means dependent

on the outcome of the review (i.e., LRM tracks dynamic status information including availability and work load, column 13, lines 43-47).

As per claim 5, Du teaches at least first and second data types in respect of a resource, the first data type comprising at least one resource attribute (i.e., resource name and capability, column 15, line 1) and the second data type comprising availability commitments of the resource (i.e., resource status, column 15, line 1).

As per claim 6, Du teaches a priority indicator for at least one availability commitment of the resource, and wherein said step of reviewing a resource profile comprises reviewing the priority indicator (i.e., two aspects of resource status including state and load, column 15, lines 50-54).

As per claim 7, Du teaches said rejection signal comprises an identifier for a selected resource, or for a selected set of resources (i.e., state of the resources including not available, column 15, lines 50-59), and wherein said steps of reviewing a resource profile and outputting availability data to the data processing means dependent on the outcome of the review comprise reviewing the resource profile for the presence of said identifier and outputting availability data only if said identifier is present (e.g., state(R) and load (R) to denote the current state and load of R, column 15, lines 50-54).

As per claim 8, Du teaches subsequent to generating and transmitting said rejection signal, triggering termination of tasks being carried out in respect of a

common work requirement to which the rejection signal is related (i.e., trigger implementation, column 18, lines 51-57).

As per claim 9, Du teaches said step of triggering termination is carried out after a predetermined time has elapsed during which no availability data has been received from a resource interface (i.e., temporal status specification, column 16, lines 37-40).

As per claim 10, Du teaches said constraint definition data comprises at least two sets of constraint definition data (i.e., state and load data, column 15, lines 50-54), and the method further comprises: receiving via a user interface a proposed modification to a first set of constraint definition data (i.e., predictable change status, column 16, lines 30-32); reviewing the proposed modification against the second set of constraint definition data; in the case that the proposed modification is compatible with the second set, modifying the first set accordingly; and in the case that the proposed modification is not compatible with the second set, transmitting a rejection signal to the user interface (i.e., determination of whether the change status state is available or not available, column 16, lines 33-37).

As per claim 12, Du teaches constraint definition data store comprises means for storing at least two sets of constraint definition data, each set having at least one input, said apparatus having means for reviewing constraint data received at one input against constraint data received at another input, and means for either outputting a rejection message or for loading the received constraint data, in dependence on the outcome of the review (column 4, lines 57-67 and column 5,



lines 1-5, where the LRM system assigns the available resources and updates the data in the second computer accordingly. The updated information would function as further availability data since the computer updates the resources and activities with respect to availability information as the information changes.)

As per claim 14, Du teaches a resource profile comprises at least one data element and a rejection message comprises at least one data element (i.e., attributes of the resource, column 15, line 1), review of a resource profile comprising matching the data element from a rejection message against the data element or elements in a resource profile (i.e., match against status and capability of the resource).

As per claim 16, Du teaches the signal input is also for receiving a management signal input from at least one management interface, one or more of said management signals comprising constraint data with respect to at least one resource, and the apparatus further comprises means for using constraint data received from a management interface to enter or change data in the constraint definition data store (column 19, lines 60-67 where OpenPM contains a rule node which contains a list of condition-action rules or constraints and as indicated in Figure 4 there is a database manager (64) that interacts with the OpenPM database which contains the constraint definition data. In addition, column 9, lines 30-34 teach that the system can interact with external environments.), and means to categorize data in the constraint definition data store according to source type (column 17, lines 40-43 where each resource group has an ID associated with it that acts as a means

of sorting or categorizing the constraint information), the apparatus being further arranged, on review of the content of the constraint definition data store, to resolve any conflict in constraint data relevant to a task acceptance signal according to its source type (column 10, lines 48-56 where the resource managers (28) are used to resolve any conflicts between the constraints and the resources so that the resources can be assigned.).

As per claim 17, Du teaches the constraint definition data store is categorized by location in the store. (As noted in Figure 1, the system contains databases. It is well known that databases store information in files where each file would have a unique "address" or location in the database.)

As per claims 20 and 21, Du teaches said constraint definition data define constraints, relating to the allocation of tasks to respective resources (LRM with control over resources, column 13, lines 41-43).

As per claim 22, Du teaches a task acceptance signal from a resource interface and wherein the apparatus is arranged in use to respond to receipt of a task acceptance signal by reviewing the content of the constraint definition data store and, depending on the result of the review to output to at least one resource interface a notification signal identifying at least one task for which resource is required, or to allocate resource to a task (i.e., task status state and load, including task availability, wherein the task being available would include task acceptance, column 15, lines 50-59).

As per claims 23 and 26, Du teaches a priority indicator for at least one availability commitment of the resource (worker), and wherein said step of reviewing a resource (worker) profile comprises reviewing the priority indicator (i.e., availability commitment based upon dynamic status information, including availability and current work load, column 13, lines 41-47).

***Claim Rejections - 35 USC § 103***

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al (US 5,826,239).

As per claim 18, Du teaches the source of data in the third category being requirements of an operational support system for use in performing allocated task(s) (column 11, lines 37-50 where the service management layer (102) functions as a support system for performing the tasks) and the apparatus is further adapted to store at least a third category of data in the constraint definition data store (column 9, lines 41-44 where the system evaluates the rules or constraints and performs the rule actions when the rule conditions are met. Whereby "rules" indicates more than one rule.) Official notice is taken that it is old and well known that "rules" may indicate three or more. Therefore it would have been obvious to one of ordinary skill in the art to modify the system of Du with three (or more) rules to provide means for allowing more constraints, and consequently more accurate resource allocation results.

***Response to Arguments***

10. In the Remarks, Applicant argues that Du et al does not teach that the rejection signal goes from the data processing means to a second worker (resource) interface different from a first resource interface from which the rejected availability change proposal was received. The Examiner respectfully disagrees. Du et al discloses one global resource manager (GRM) 142 connected to the WFMS 17 and a number of local resource managers (LRMs) 144A-144D each manage a number of resources 146A-C, 147A-C, 148A-C, 149A-C at their respective sites. The invention employs the concept of two-step resource assignment. Instead of doing resource assignment in one step either at a central site (in global management approach) or at remote sites (in local management approach), the approach of the present invention first checks at a central site (the GRM) the availability of resource groups, and then selects, at remote sites, specific resources from the group (column 13, lines 12-25). As such, Du et al discloses a plurality of LRMs connected to the GRM, i.e., a first, second, third, etc., interface communicating with the data processing means.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Boyce whose telephone number is (571)272-6726. The examiner can normally be reached on 9:30-6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andre Boyce/  
Primary Examiner, Art Unit 3623  
September 14, 2008